BRUHAT BANGALORE MAHANAGARA PALIKE, YELAHANKA ZONE

Executive Engineeer
Byatarayanapura Division
B.B.M.P., Bangalore - 92

DRAFT TENDER SCHEDULE

Issued to :

Original / Duplicate

Name of work: Construction of Two Pure Drinking water units in Ward No.07 Byatarayanapura

Sl. No.	Quantity.	Description	Unit	Rates	
				In Figures	In Words
1	3.62	KSRB 2-1.1: Earth work in surface excavation in ordinary soil for leveling and lowering the ground manually (other than foundation of buildings, culverts, road drains and trenches of pipe line and cables) and removing the excavated stuff to a distance not exceeding 50m and lift upto 1.5m, excavated surface leveled and neatly dressed, disposed earth to be leveled after breaking of clods and neatly dressed as per specifications, Specification No KBS 2.1(a) / 2.3.1,P. No. 5/ Item No. 2.1/ PWD SR 2015-16	cum	156.88	Rupees One Hundred Fifty Six and Eighty Eight Paise Only
2	**13.89**	KSRB 2-2.2 : Earth work excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in **hard soil** not exceeding 1.5m , in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m. specification, specification. No. KBS 2.1(b) / 2.3.5, **Page No. 5 / Item No. 2.4 / PWD SR 2015-16**	cum	283.02	Rupees Two Hundred Eighty Three and Two Paise Only
3	**3.96**	KSRB-4-1.3 : Providing and laying in position plain cement concrete of mix M 1:4:8 withOPC cement at 180kgs, with 40mm and down size graded granite metal coarse aggregates @0.892cum and fine aggregates @0.57cum machine mixed, concrete laid in layers not, exceeding 15cms, thick, well compacted, in foundation and plinth, including cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1,4.2, No. 12/ Item No. 4.3/ PWD SR 2015-16.	cum	4976.70	Rupees Four Thousand Nine Hundred Seventy Six and Seventy Paise Only
4	**8.05**	KSRB 5.2.3 : Providing and constructing granite / trap / basalt size stone masonry in **foundation with cement mortar 1:6**, stone hammerd dressed in courses not less than 20 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications.KBS 5.1.13 **Page No. 23 / Item No. 5.6 / PWD SR 2015-16**	sqm	4058.74	Rupees Four Thousand Fifty Eight and Seventy Four Paise Only
5	1.98	KSRB 5.3-3 : Providing and constructing granite / trap / basalt size stone masonry in **basement with cement mortar 1:6**, edges of stones chistle dressed in courses not less than 15 cms high, bond stones at two m. apart in each course including cost of materials, labour, curing complete as per specifications.KBS 5-1.13 **Page No. 23 / Item No. 5.9 / PWD SR 2015-16.**	cum	4814.52	Rupees Four Thousand Eight Hundred Fourteen and Fifty Two Paise Only
6	5.93	KSRB 2.3 : Filling available excavated earth (excluding rock) in sides of foundations upto plinth in layers not exceeding 20 cms. in depth, compacting each deposited layer by ramming after watering with lead upto 50 m. and lift upto 1.5 m. including cost of all labour complete as per specifications. Specification No. KBS 2.9 **Page No. 6 / Item No. 2.10 PWD SR 2015-16**	cum	127.20	Rupees One Hundred Twenty Seven and Twenty Paise Only
7	**1.98**	KSRB 4-1.6 : Providing and laying in position plain cement concrete of **mix 1:2:4 with cement @ 240 kgs with 20mm** and down size graded granite metal coarse aggregates @ 0.878 cum and fine aggregates @ 0.459 cum, machine mixed, concrete laid in layers not exceeding 15cms, thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM of machinery, curing complete as per specifications, specification. No. KBS 4.1,4.2. **No. 12/ Item No. 4.6/PWD SR 2015-16**	cum	5389.04	Rupees Five Thousand Three Hundred Eighty Nine and Four Paise Only
8	**35.44**	KSRB 5-14 : Providing and constructing precast concrete solid blocks with compressive strength not les than 35 Kg/sqm with cement mortar 1:4 masonry (quoin, Jamb, closer blocks) with solid concrete blocks of size 40x20x20 cms conforming to I.S: 2185/1965 in superstructure including cost of materials, labour charges, scaffolding, curing complete as per specifications. **Page No. 27/ Item No. 5.27/ PWD SR 2015-16.**	Sqm	999.58	Rupees Nine Hundred Ninety Nine and Fifty Eight Paise Only

No ~~}~~ correction - Nil

E.E. (BTP. DIV)
3/01

	Quantity.	Description	Unit	Rates	
				In Figures	In Words
9	70.88	KSRB 15.3.6 : Providing 15mm thick cement plaster in single coat with cement mortar 1:6, to brick masonry including rounding off corners wherever reuired smooth rendering, : Providing and removing scaffolding, including cost of materials, labour. Curing complete as per specifications. **Page No. 97/ Item No. 15.14 / PWD SR 2015-16**	Sqm	168.54	Rupees One Hundred Sixty Eight and Fifty Four Paise Only
10	6.04	KSRB 7.8 : Providing and fixing in position in cement concrete 1:3:6 steel glazed windows and ventilators side hung/top hung 2/3 openable 1/3 fixed as per approved drawings using Z angles of 25x33x3mm, weighing 1.419Kg/m both for outer and inner frames and central mullion section of size 25x46x3mm weighing 2.28Kg/m all duly providing T section 19x19x3mm weighing 0.839 kg/m for glazing of windows not more than 34 cms. c to c including providing and fixing 4mm thick reeded glass with teakwood beading of required size, all steel section should confirm to I.S. 7452:1990, 4nos, of holdfasts of approved size section should be cut to length welded and electrically grinded subdividing frames of unit shall be tenonned and revetted into the frames electrically. All the steel surface shall be thoroughly cleaned free of rust and painted with one coat of anti-corosive paint and finishing two coats of ready mix paint of approved colour and make including cost of materials, fixtures, labour and HOM of machinery complete as in each row @ 10.00 **Mtr C/C along the length & hangers for electrical fixtures as per the**	Sqm	3209.68	Rupees Three Thousand Two Hundred Nine and Sixty Eight Paise Only
11	131.75	Fabricating, supplying & erecting M.S. Angular Truss of span upto 10m The bottom & top member is providied with 50x50x6mm double equal angles, welded back to back and in between top and bottom line, in areas of mid section is provided with 50x50x6mm queal single angle for vertical and inclined members and at supporting ends 40x40x5mm single angle is provided. all the members are welded together with 6mm gusset plate as per drawing no. CBS/SD/K-Mantap/9MND/97. The entiretruss is anchored in RCC coloumn by using 4 No.. of M.S.Anchor bolts at each support, with 10mm thick base plate and shoe plate. the work includes cutting straightening, placing in position of M.S. anble and welding whereverr necessary, and applying one coat of red oxide primer coat to all the members including cost of all materials, labour charegs, & hire charges of machineries for cutting, welding, grinding & erection equipments, etec., complete as per specification (PWD SR 15-16 && Page No. 41 & Item No. 7.30)	No	128.26	Rupees One Hundred Twenty Eight and Twenty Six Paise Only
12	13.73	Providing and fixing self-supported, ribbed, high quality, high grade (D:350 MPA Yst Min), pre- painted Galvalume steel roof sheet, coated with bare Galvalume coating AZ 150, @ 150 gms/Smtr 55%AL,45%Zn) by hot dip process , of total coated thickness as specified for different spans with a tolerance of +/- 0.02 mm, according to technical specification confirming to A 792, with NCCA 11-1, or ECCA T4 Pencil hardness HB, NCCA standard T-Bend test. The roof should be fastened to the gutter on the external sloping side, at an interval of 51mm Centre to Centre, to a depth of 65 mm with GI anchor bolts and neoprene washers & subjecting the gutter beam to Schmidt, Hammer test to ensure the anchorage of the anchor bolts. The self-supported roofing system should be designed to with stand the wind load (As per IS 875 part-3) & Earthquake load (as per IS 1893) & the design should also comply with any other technical requirements such as turbo ventilators of 0.60 mts. dia and skylights of size 4.26 x 0.60 mts. fixed one in each row @ 10.00 Mtr C/C along the length & hangers for electrical fixtures as per the requirements including cost of all materials &labour for erection, all lead and lift, loading and unloading, HOM of machineries etc., complete as per the standard detailed technical specification, design and directions of the engineer in charge of the work..(a) Span : 9 Meters upto 15 Meters (b) Material Specification: Colour Coated Galvalume Sheet, weighing 10.10 kg/sqm BMT: 0.80 MM, APT : 0.85 MM, tolerance +/- 0.02mm (PWD SR 15-16 & Page No 94 & Item No 13.78)	No	2059.05	Rupees Two Thousand Fifty Nine and Five Paise Only

No of corrections - Nil

E.E. (BTS. DIV)
23/01

	Quantity.	Description	Unit	Rates	
				In Figures	In Words
13	9.80	KSRB: 7.5 Providing and fixing pull and push type rolling shutters of approved make out of 18 guage, 75mm wide cold rolled steel laths of convex corrugation, with side guides and bottom rail, with interlocking arrangements for steel laths by means of alternate clips, suspension shaft with High tension coil type springs two numbers, mounted on specially designed pipe shaft, with bracket plates, guide channels, ball bearing arrangements, for inside & outside locking with push & operations complete Including pulling hooks, 4nos handles wit hall fittings and accessories, painted with a coat of red lead paint (without top cover) cost of materials, labour, HOM of machinery complete as per specifications. Shutter size 3mx2.8m Specification NO. KBS 7.10 / 7.12 **Page No. 30/ Item No. 7.5/ PWD SR 2015-16**	sqm	2838.68	Rupees Two Thousand Eight Hundred Thirty Eight and Sixty Eight Paise Only
14	3.00	KARB 7.6 Providing and fixing top covers made out of 20 guage M.S. sheet over m pull and push rolling shutters bent to shape including cost of red lead primer coat of painting, materials, labour, HOM of machinery complete as per specifications. Shutter size 3mx2.8m Specification NO. KBS 7.10 / 7.12 **Page No. 31/ Item No. 7.6/ PWD SR SR 2015-16**	Rmt	558.62	Rupees Five Hundred Fifty Eight and Sixty Two Paise Only
15	27.46	Providing flooring with 60cms. x 60 cms. size Vitrified glazed tiles of approved quality & make, fixed on top of existing flooring fixed with suitable adhesive, including cutting the tiles to the required size and fixing etc., complete. **Page No. 107/ Item No. 14.44 / PWD SR 2015-16**	Sqm	1087.56	Rupees One Thousand Eighty Seven and Fifty Six Paise Only
16	195.00	Providing and fixing chorinated poly Venyl cholride (CPVC) pipes conforing to IS 15778, having thermal stability for hot and cold water supplying including all CPVC plain and brass threaded fittings including fixing the pipe with clamp at 1.00 mtr spacing This included jointing of pipes and fittings with one step CPVC solvent cement and testing of joints complete (internal work exposed on wall(-20mm nominal OD pipes. (PWD SR15-16 & page No. 96 Item No. 13.85.2)	Rmt	143.10	Rupees One Hundred Forty Three and Ten Paise Only
17	6.00	Providing and fixing gun metal wheel vave conforming to IS specification of approved make as per directions including all lead and lift etc., complete. **Page No. 82/ Item No. 13.79 / PWD SR 15-16**	No	312.70	Rupees Three Hundred Twelve and Seventy Paise Only
18	4.00	KSRB 13-11.1 : Providing and placing on terrace, polthylene water storage tanks with manhole lid and suitable locking arrangements, making holes of suitable diameter for inlet, outlet and over flow pipes, including cost of all materials, labour, transport charges, HOM of equipments and testing complete as per specifications. (For 1000 litre capacity) Specification No. KBS 13.22 (P.94/I.13.78 PWD SR - 2015-16).	No	8851.00	Rupees Eight Thousand Eight Hundred Fifty One Only
19	1.00	1HP/7.5KW Atalanta/Suguna/CRI / Kirloskar /Other Equivalent pumps (PWD SR15-16 & Page No. XXXXII & S.NO. 1)	No	13356.00	Rupees Thirteen Thousand Three Hundred Fifty Six Only
20		Providing R.O. Plant Providing revsrse osmosis suystem to cover 2000 Liters of High TDS water per hour			
A		**TECHNICAL SPECIFICATIONS**			
		Flow Rate:			
		Feed Water : 5000 LPH			
		Treated Water : 3000 LPH			
		Reject Water : 2000 LPH			
B		**RAW WATER PUMP**			
		Purpose:- To feed the Dual Medial filter at pressure more than 2.00 bars which is min operating pressure for filter?			
C		**SAND MEDIA FILTER**			
		Purpose:- To remove the total suspendred solids, dirt, iron and reduce silt density index which can foul the members			
D		**ACTIVATE CARBON FILTER**			
		Purpose:- To remove the total color, smell, odor from the water.			
		Media: Mixed bed sand media consisting of the following i) Gravel ii) Pebbles iii) carbon Average porosity 50 micron particulate size bed depth : 1500 mm pipelines & Accessories : Pipe of PVC 10 Bar tested pressure testing cock & pressure gauges at intlet - outlet of system			
E		**DOSING SYSTEM**			
		Purpose : To dose anti scaling chemical to protect the scaling formation on RO Membranes			
F		**MICRON FILTER**			
		Purpose : To remove the fine particles ip to 05 microns and reduce silt density levels to acceptable level.			
G		**HIGH PRESSURE PUMP**			

	Quantity.	Description	Unit	Rates	
				In Figures	In Words
		Purpose : To feed the reverse Osmosis membrane at pressure more than the osmotic pressure taking into consideration flux rate, flow and recovery			
H		**RO membrane housing.**			
		Purpose : To pack membrane and operate at high pressure.			
I		**RO MEMBRANES**			
		Purpose : To remove the major part of TDS into 98% by Reverse Osmosis Membranes arranged and designed to give adequate flow the Recovery.			
		RO CLEANSING SYSTEM			
J		**ELECTRICAL PANEL**			
		Purpose : A control panel is provided as a safety measure for the pumps & other electrical items.			
		Specifications a) Complete starters, overload relays, b) Voltmeter, Ammeter, MCB's indicating lights, c) Rocker switches for Dozers, d) incomers, Auto-Manual switches.			
K		**INSTRUMENTATION**			
		Purpose : a) Flow meter : To measure the online flow of water flowtec b) Low pressure switch : To protect RO pump from dry running c) High pressure switch : To protect RO pump from back pressure d) Pressure Gauges : For calculate AP for each unit in RO system			
L		**PH DOSING SYSTEM**			
21	1.00	Purpose to dose sodium Bi-carbonate for enhances product water SS till the pre-filteration & SS from HPP to thhe premeter line termination point NRV's pressure relief valves, wherever needed the system will be on common SS base frame supply & manufacture of complete Reverse Osmosis plant stainless steel tank (2kl) Raw water tank (5kl) with stainless steel pipe line required for plant erection.	Nos	810000.00	Rupees Eight Hundred Ten Thousand Only
22	6.00	Supplying and wiring adopting loop system in existing PVC Conduit / casing capping using 1100V grade, COPPER conductor flexible multistrand FRLS PVC insulated, 2 X1.5Sq.mm Cable confirming to the GTP, with a 6Amps flush type SP control switch shall be fixed on the existing plastic sheet / gang box, the other end of the wires shall be terminated with sufficient loose length in a wood/PVC round block. complete for each outlet. GROUP A b) Medium point above 3Mtr upto 6Mtr from tapping point to out let via switch **(Page No. 05, Item No.2.1 KPWD SR 2014-15**	Point	245.00	Rupees Two Hundred Forty Five Only
23	6.00	c) Long point above 6Mtr upto 10Mtr from tapping point to out let via switch	Point	363.00	Rupees Three Hundred Sixty Three Only
25	30.00	Supplying and flush mounting teak wooden box without front plank, made of not less than 12mm thick wood, after due groove cutting, Finishing with necessary cement plastering complete (1.6.5) 4"x4"x3" (101x101x76mm) **(Page No. 03, Item No. 1.6) KPWD SR 2014-15**	Each	68.00	Rupees Sixty Eight Only
26	18.00	(1.6.1) 12"x12"x3" (300x300x76mm)	Each	116.00	Rupees One Hundred Sixteen Only
27	15.00	(1.6.3)10"x7"x3" (254x178x76mm)	Each	87.00	Rupees Eighty Seven Only
28	13333.00	Supplying 4mm thick plastic sheet with necessary nitches for fixing switches, regulators etc., and fixing on existing wooden or metal box using N.F. screws. **(Page No. 17, Item No. 3.9) KPWD SR 2014-15**	SqCM	0.25	and Twenty Five Paise Only
29	30.00	Extra for Groove cutting in brick wall/CC floor to the suitable depth for concealing of Conduit/GI pipe and plastering, finishing upto wall surface complete. upto 50mm conduit in brick wall **(Page No. 03, Item No.1.7.1) KPWD SR 2014-15**	Mtr	21.00	Rupees Twenty One Only
30	25	Supplying heavy gauge PVC Conduit Pipe 19/20 mm dia 2 mm thick with suitable size bends, metal junction boxes adhesive paste etc., by groove cutting in the wall and fixing by bracing U or J hooks and cement plastering up to the wall surface and run with 18 SWG GI fish wire run throughout the conduit wherever necessary. **(Page No. 02, Item No. 1.3.1) KPWD SR 2014-15**	Mtr	56.00	Rupees Fifty Six Only
31	4	Supplying and fixing PBBC/Bakelite straight or slant batten holder and wiring with 60w/230 volts lamps. **(Page No. 20, Item No. 4.2) KPWD SR 2014-15**	Each	88.00	Rupees Eighty Eight Only
32	4	Supplying patti type fluorescent tube light fitting of 2' - suitable for 14 watts fluorescent tube fitting, made out of M.S. Sheet and stove enameled with HF Electronic Ballast , locking type brass contact holders mounted on double fold type sheet base fully wired for use on 230 volts AC . Supply including T5 lamp. **(Page No. 20, Item No. 4.5) KPWD SR 2014-15**	Each	591.00	Rupees Five Hundred Ninety One Only

No.	Quantity.	Description	Unit	Rates	
				In Figures	In Words
33	15	Wiring for lighting/power circuit using one of FRLS PVC insulated 1100V grade, multistrand Copper with low conductor resistance single core wire in open or concealed system of wiring with specified IS-694:1990 & confirming to GTP of GROUP -A 1.5 sqmm **(Page No. 06, Item No. 2.5.2) KPWD SR 2014-15**	Mtr	18.60	Rupees Eighteen and Sixty Paise Only
34	8	Supplying and fixing cast Aluminum round or oblong type bulk head fitting with GI wire guard, glass cover with 60/100 watts 230V GLS lamp. **(Page No. 20, Item No. 4.3) KPWD SR 2014-15**	Each	747.00	Rupees Seven Hundred Forty Seven Only
35	1	Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit ... The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia **(Page No. 55, Item No. 7.1) KPWD SR 2014-15**	No	2727.00	Rupees Two Thousand Seven Hundred Twenty Seven Only
36	40.00	Supplying of 1.1 KV LT UG cable having aluminum conductor PVC insulated, extruded inner sheathed, galvanized, steel strip (except 2CX10Sq.mm wire armoured) confirming to IS-3975:1990 (No. of Strip indicated in GTP) & extruded PVC outer sheathed armoured cable with specified IS-1554 Part-1:1988 & confirming to GTP of GROUP-A **P No. 55/ I No. 7.4.4 4 core 16 Sqmm KPWD Electrical SR 2014-15**	Mtr	140.40	Rupees One Hundred Forty and Forty Paise Only
37	40.00	Labour charges for laying of 1.1 KV class UG cable in existing trench GI pipe / stoneware pipe / on wall / on pole as required.In existing trench/duct. **P No. 61 / I No. 7.8.1 6Sqmm to 16 Sqmm) KPWD Electrical SR 2014-15**	Mtr	10.80	Rupees Ten and Eighty Paise Only
38	40.00	Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete For Cutting Road Surface .(As per Civil SR KSRB I-2, P-7) **P No. 61 / I. No. 7.9.3 KPWD Electrical SR 2014-15**	Mtr	85.00	Rupees Eighty Five Only
39	4.00	Supplying and fixing of class A (medium duty) GI pipe of wall thickness not less than 3.25mm on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV 40mm dia GI pipe **P. No. 62 / I No. 7.12.1 KPWD Electrical SR 2014-15**	Mtr	345.00	Rupees Three Hundred Forty Five Only
40	1.00	Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class UG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers 16Sqmm etc., **P. No. 62 / I.No. 7.13.2 KPWD Electrical SR 2014-15**	No.	280.00	Rupees Two Hundred Eighty Only
41	2000	Polyethylene water storage tank of sepcified capacity and make.	L	6.20	Rupees Six and Twenty Paise Only
42	160.00	Providing and fixing Chlorinated Poly Venyl Chloride(CPVC) pipes confirming to IS 15778 having thermal stability for hot and cold water supply including all CPVC plain and brass threaded fittings, this includes refilling and testing of joints complete. (internal work exposed on wall).20mm nominal OD pipes.	m	145.80	Rupees One Hundred Forty Five and Eighty Paise Only

No of corrections - Nil

Executive Engineer
Byatarayanapura Division
BBMP, Bangalore - 92

3/01

Note:

1 Item for which no rate or price has been entered in will not be paid for by the Employer when executed and shall be deemed covered by the other rates and prices in the Bill of quantities (refer: ITB Clause 7.2 and CC Clause 33.2)

2 Unit rates and prices shall be quoted by the Tender in Indian rupees.

3 Where there is a discrepancy between the rate in figures and words the rates in words will govern (ITB Clause 19.1(a)

4 Where there is a discrepancy between the unit rate and the line item total resulting from multyplying the unit rate by quantity the unit rate quoted shall govern (ITB Clause 19.1(b))

"DTS Approved"

3.01.17